Utah Influenza Report

This report contains data through the week ending 01/19/2013 (MMWR week 03).

UTAH DEPARTMENT OF HEALTH
Communicable Disease Analysis & Reporting Program

Overview of Influenza Surveillance: Surveillance for the 2012-2013 influenza season officially began on September 30, 2012. The Utah Department of Health publishes a weekly report throughout the active influenza season that synthesizes data from a variety of sources to give the most complete and up-to-date picture of influenza activity in the state of Utah. Data in this report should be considered provisional, and may change as more complete reports are recieved.

Influenza-like Illness (ILI): The U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet) is a national system that conducts surveillance for influenza-like illness (ILI) in outpatient healthcare facilities. ILINet providers report weekly the total number of patients seen for any reason and the number of patients seen with ILI (defined as a fever ≥ 100° F and a cough or sore throat). These data are used to determine the amount of ILI circulating in the community, as well as provide insight into regional differences in ILI activity. Currently, more than 50 facilities throughout Utah participate in ILINet.

Figure 1. Weekly Influenza-like Illness Activity
Influenza-like illness (ILI) activity as measured by the number of standard deviations from the epidemic threshold - Utah, 2012-2013

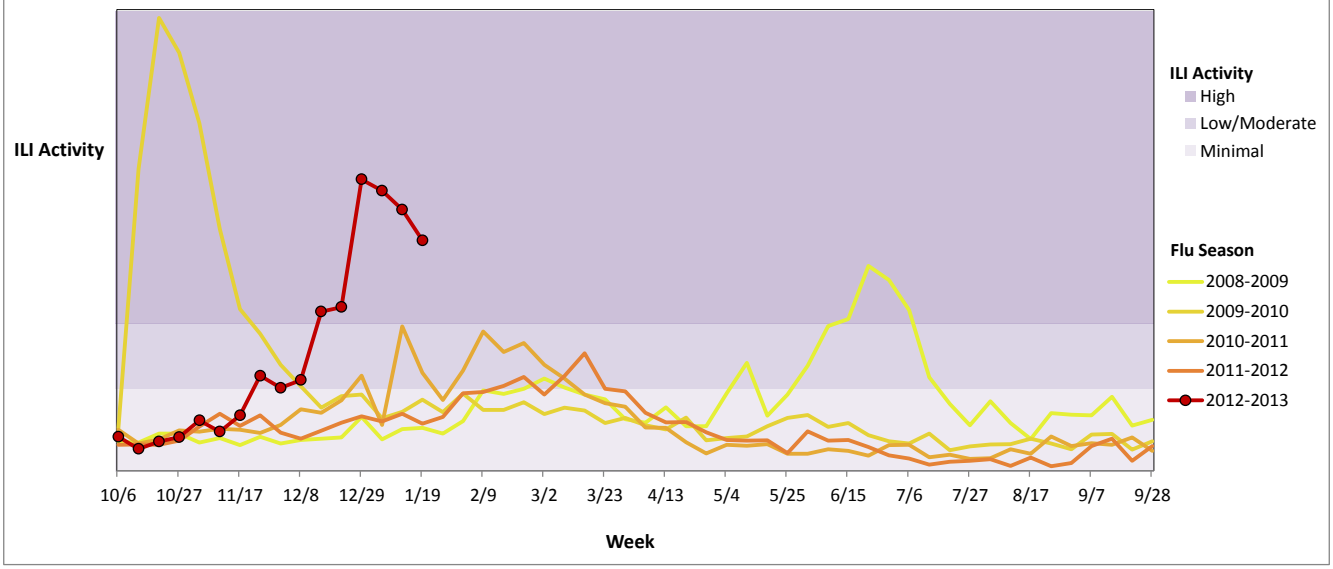

Table 1. Influenza-like Illness (ILI) Activity Levels by Health District - Utah, Current Week

Health District	ILI Activity
Bear River	High
Central	Minimal
Davis	Low/Moderate
Salt Lake	High
Southeastern	No Data
Southwest	High
Summit	Minimal
Tooele	Minimal
TriCounty	No Data
Utah	High
Wasatch	Minimal
Weber-Morgan	Minimal
State	**High**

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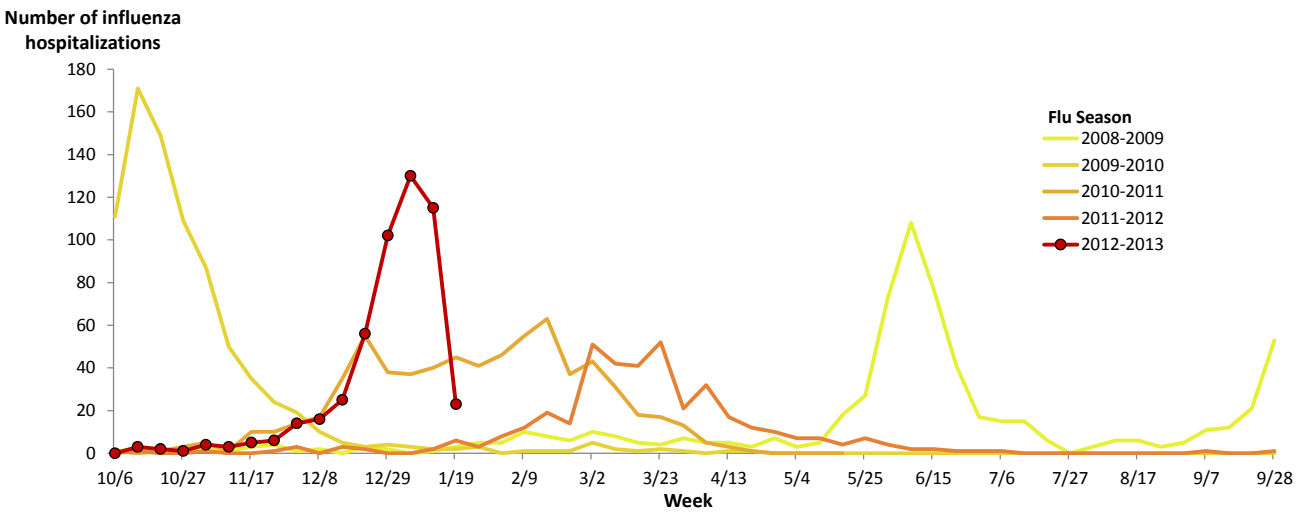
Influenza Hospitalizations: Influenza hospitalizations are a reportable condition in Utah. A person meets the case definition for an influenza hospitalization if they are hospitalized for any length of time and have an influenza positive serology, DFA, PCR, or culture test (confirmed case) or a positive rapid influenza diagnostic test (probable case). Public health in Utah gathers a variety of data on influenza hospitalizations including clinical features, course of illness, risk and protective factors, and influenza type and subtype. Data from influenza hospitalizations allows public health in Utah to better understand subgroups of the Utah population that are most severely effected by influenza and help to guide prevention messages and interventions.

Figure 2. Influenza Hospitalizations
Number of influenza hospitalizations by event date* - Utah, 2012-2013



*Event date is calculated based on a hierarchy of dates: 1. onset date 2. specimen collection date 3. date reported to public health.

Table 2. Influenza Hospitalizations by Case Status - Utah

	Current Week		Season To Date	
Case Status	**Total**	**% of Cases**	**Total**	**% of Cases**
Confirmed	21	91.3	472	93.5
Probable	2	8.7	33	6.5
Total	**23**	**100.0**	**505**	**100.0**

Table 3. Influenza Hospitalizations by Health District - Utah

Health District	Current Week	Season To Date
Bear River	0	36
Central	2	23
Davis	1	47
Salt Lake	7	211
Southeastern	0	1
Southwest	7	60
Summit	0	7
Tooele	0	1
TriCounty	0	8
Utah	2	67
Wasatch	0	3
Weber-Morgan	4	41
State	**23**	**505**

Table 4. Influenza Hospitalizations by Age Group - Utah, Season To Date

Age Group	Total Cases	% of Cases	Rate*
0-4	108	21.4	39.91
5-24	66	13.1	6.98
25-49	64	12.7	6.45
50-64	72	14.3	17.98
65+	195	38.6	78.95
Total	**505**	**100.0**	**17.68**

*Rate is calculated as the number of cases per 100,000 population

Table 5. Influenza Hospitalizations by Sex and Race - Utah, Season To Date

Variable		Num. of Cases	% of Cases	% in Utah Pop	p value*
Sex	Male	246	48.7	50.3	0.4750
	Female	258	51.1	49.7	0.5317
	Unknown	1	0.2	NA	--
Race	White, Not Hispanic	419	83.0	82.0	0.5858
	Hispanic	53	10.5	11.6	0.4433
	Native Hawaiian/Pacific Islander	14	2.8	0.7	<0.0001
	Black/African American	10	2.0	0.9	0.0144
	American Indian	1	0.2	1.1	0.0472
	Asian	8	1.6	1.9	0.6365
	Unknown	0	0.0	NA	--

*If a p value is ≤ 0.05, there is a significant difference between the percentage seen in influenza hospitalizations and the general Utah population.

Table 6. Summary Data for Influenza Hospitalizations - Utah, Season To Date

	Yes		No		Unknown	
Variable	Total	% of Cases	Total	% of Cases	Total	% of Cases
ICU	52	10.3	313	62.0	140	27.7
Ventilator	23	4.6	341	67.5	141	27.9
Died	14	2.8	343	67.9	148	29.3
Neurological Symptoms	32	6.3	320	63.4	153	30.3
Healthcare Worker	3	0.6	222	44.0	280	55.4
Pregnant	15	3.0	440	87.1	50	9.9
Heart Disorder	129	25.5	232	45.9	144	28.5
Blood Disorder	12	2.4	347	68.7	146	28.9
Kidney Disorder	45	8.9	314	62.2	146	28.9
Metabolic Disorder	100	19.8	261	51.7	144	28.5
Chronic Respiratory Disorder	126	25.0	236	46.7	143	28.3
Immunosuppressed	39	7.7	318	63.0	148	29.3
Neurological Disorder	32	6.3	320	63.4	153	30.3
Seizure Disorder	11	2.2	347	68.7	147	29.1
Bacterial Co-infection	5	1.0	350	69.3	150	29.7
Obese*	45	13.5	90	27.0	198	59.5
Morbidly Obese*	8	2.4	127	38.1	198	59.5
Risk Factor†	471	93.3	34	6.7	0	0.0
Vaccinated	102	20.2	142	28.1	261	51.7

*Obesity and morbid obesity is not considered for individuals under 18 years or pregnant women. Thus total counts will not equal the total number of influenza-associated hospitalizations

†Risk factors for influenza include: persons < 5 years, persons ≥ 65 years, pregnant women, and persons with a chronic medical condition.

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Student Absenteeism: School-age children are at high risk for respiratory virus infections, including influenza. Aggregate, all-cause absenteeism data is collected weekly from over 350 schools throughout Utah. These data are analyzed to identify elevated absenteeism rates that could indicate the circulation of influenza in school-age children.

Figure 3. Student Absenteeism by Week

Rates for absences due to all causes - Utah, 2011-2012 and previous 3 year average

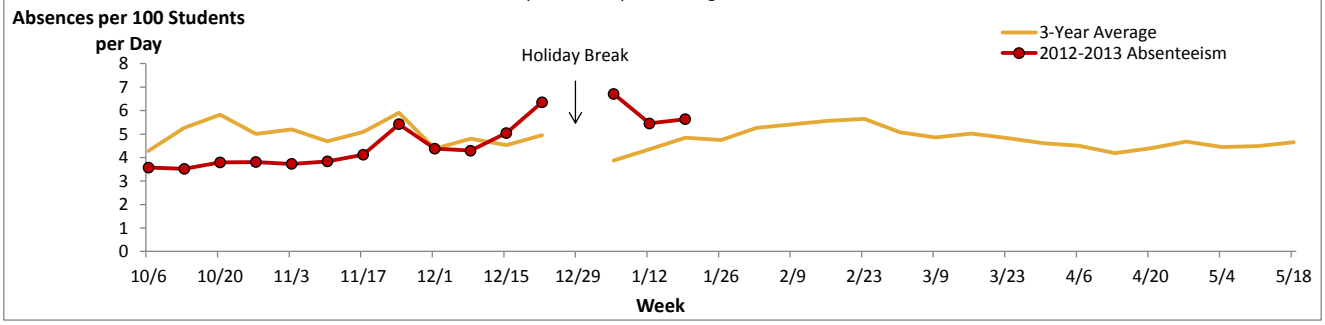


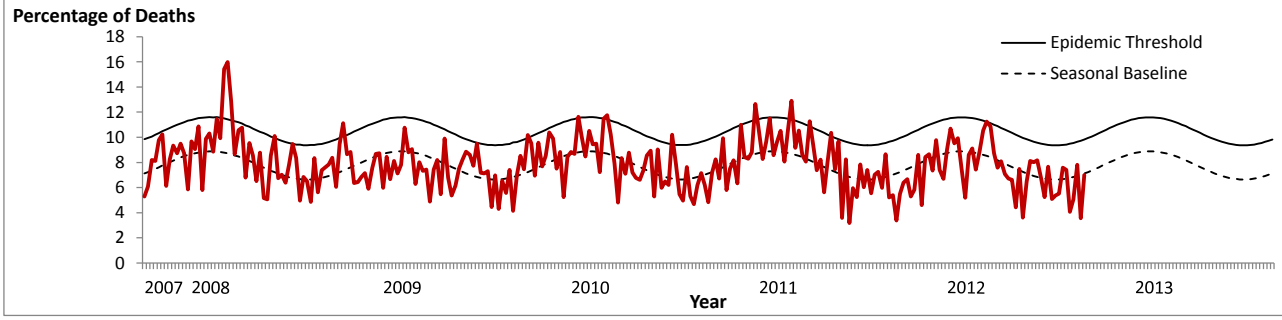
Table 7. Weekly Student Absenteeism - Utah, Current Week

Health District	Absences per 100 students/day
Bear River	4.2
Central	4.8
Davis	5.9
Salt Lake	5.7
Southeast	5.9
Southwest	7.0
Summit	--
Tooele	6.7
TriCounty	4.2
Utah	2.5
Wasatch	9.3
Weber-Morgan	6.3
State	**5.7**

Pneumonia and Influenza Deaths: Each week the total number of death certificates received and the number of those for which pneumonia or influenza was listed as an underlying or contributing cause of death is collected. The percentage of deaths due to pneumonia and influenza are compared with a seasonal baseline and epidemic threshold value calculated for each week. These data are used to monitor the severity of influenza illness in the community.

Figure 4. Pneumonia and Influenza Deaths

Percentage of deaths attributable to pneumonia and influenza by week of death - Utah, 2007-2013



http://health.utah.gov/flu ● 801-538-6191 ● epi@utah.gov

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Laboratory Surveillance: The Unified State Laboratory: Public Health recieves specimens from all over the state for comprehensive influenza testing. All specimens are tested to determine influenza type and subtype. A portion of specimens are also sent to the Centers for Disease Control and Prevention for addtional testing, including gene sequencing, antiviral resistance testing and antigenic characterization.

Figure 5. Influenza Positive Tests

Influenza positive specimens tested by Unified State Laboratory: Public Health - Utah, 2012-2013

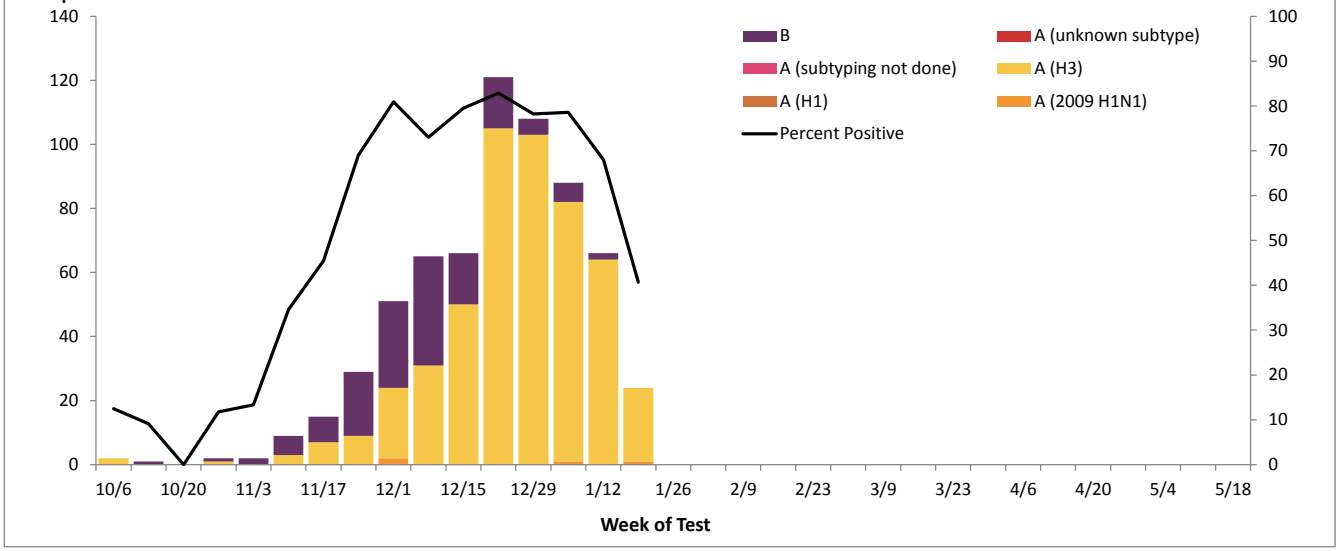

Table 8. Unified State Laboratory: Public Health Influenza Testing Data

	Current Week		Season To Date	
	Total	Percent	Total	Percent
Specimens tested	59	--	956	--
Positive specimens	24	40.7	649	67.9
Positive Specimens by Type/Subtype				
Influenza A	24	100.0	505	77.8
A (2009 H1N1)	1	4.2	4	0.8
A (H1)	0	0.0	0	0.0
A (H3)	23	95.8	501	99.2
A (subtyping not performed)	0	0.0	0	0.0
A (unable to subtype)	0	0.0	0	0.0
Influenza B	0	0.0	144	22.2